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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,865	07/21/2004	Mikio Mori	255738US90PCT	3628

22850 7590 07/21/2006

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EXAMINER	
WOOD, KEVIN S	

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/500,865	MORI ET AL.	
	Examiner	Art Unit	
	Kevin S. Wood	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Kevin S. Wood

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

NON-FINAL REJECTION

Response to Amendment

1. This action is responsive to the Amendment filed on 27 April 2006. Claims 1-18 have been amended. New claims 19-20 have been added. Claims 1-20 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application Publication 2001-116936 to Hitachi Cable LTD.

Referring to claims 1, 4, 5, 8, 9, 14, 15 and 18, the Hitachi reference discloses a waveguide type optical module comprising: an optical waveguide (1); a temperature control element (2) configured to control a temperature of the optical waveguide, the temperature controlling element comprising a plate (3) having a first surface and a second surface on an opposite side of the first surface; a pedestal (4) supporting the temperature control element via the plate; and a casing (5) encasing the optical waveguide, temperature control element and pedestal therein; wherein the optical waveguide is provided on the first surface of the plate, the second surface of the plate has a heater (8) on or buried in the second surface of the plate (3), and the pedestal supports the plate. See Fig. 1 and Fig. 5 of the reference along with their respective portions of the specification.

The reference does not appear to specifically disclose that the contact area of the pedestal or pedestals is less than 30% of he surface area of the plate. However, the drawings show the pedestals having occupying only a small area of the plate surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the pedestals so that they contact less than 30% of the plate surface area, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only

routine skill in the art. In re Aller, 105 USPQ 233. Since the reference deals with temperature control of the optical module, the dimensions of the pedestals would be precisely controlled in order to control the rate of heat transfer through the pedestals to the casing in order to maintain the optimum functional temperature for the optical components.

The reference does not appear to specifically disclose the plate (3) is a ceramic plate. However, the reference does disclose that the plate has a material of at least 100 W/mK in heat conductivity. Many ceramics (such as silicon carbide ceramics, specifically SiSiC at 150 W/mK and SsiC at 100 W/mK) have a suitable heat conductivity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a ceramic having a heat conductivity of at least 100 W/mK to form the plate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416.

Referring to claims 2, 6, and 16, the Hitachi reference discloses the pedestal (4) is in contact with the bottom corner edge portion of the plate (3) to support the plate. See Fig. 1 and Fig. 5 of the reference along with their respective portions of the specification.

Referring to claims 3, 7, 13 and 17, the Hitachi reference discloses the pedestal (4) is in contact with the bottom corner edge of the plate (3) to support the plate. The bottom of the plate can be considered to be one of its end faces. See Fig. 1 and Fig. 5 of the reference along with their respective portions of the specification.

Referring to claims 10-12, the Hitachi reference does not appear to specifically disclose the claimed dimensions and ranges for the pedestal contact area relative to the surface of the plate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the pedestals so that they have the claimed range of dimensions, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. Since the reference deals with temperature control of the optical module, the dimensions of the pedestals would be precisely controlled in order to control the rate of heat transfer through the pedestals to the casing in order to maintain the optimum functional temperature for the optical components.

Referring to claims 19 and 20, the Hitachi reference discloses that the optical waveguide is configured to demultiplex an optical signal. Specifically the Hitachi reference discloses that the plate expansion stabilizes the demultiplexing characteristics of the optical waveguide. See Fig. 1 and Fig. 5 of the reference along with their respective portions of the specification.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin S. Wood
Patent Examiner